

Appl. No. : 09-47,861
Filed : March 17, 1999

Please add the following claims:

Claim 8, (New) The coated powder as claimed in claim 1, wherein an amount of the coating layer (C) consisting of the material having a refractive index of 1.3 to 1.8 is 2 to 10 % by weight based on the total amount of the coated powder.

Claim 9. (New) The coated powder as claimed in claim 1, wherein an amount of the coating layer (B) consisting of the material having a refractive index of 1.9 to 3.1 is 5 to 30% by weight based on the total amount of the coated powder.

REMARKS

Claims 1, 2, 6, and 7 have been amended. New claims 8-9 are added. Claims 1-9 are now pending in this application. Support for the amendments is found in the existing claims and the specification as discussed below. Accordingly, the amendments do not constitute the addition of new matter. Applicant respectfully requests the entry of the amendments and reconsideration of the application in view of the amendments and the following remarks.

The specific changes to the specification and the amended claims are shown on a separate set of pages attached hereto and entitled **VERSION WITH MARKINGS TO SHOW CHANGES MADE**, which follows the signature page of this Amendment. On this set of pages, insertions are underlined and deletions are struck through.

Rejection under 35 U.S.C. § 102(b)

Claims 1-7 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,246,780 to Farer, et al.

The Examiner asserts that Farer, et al. teach coated particles and that in one embodiment, spherical particles are disclosed with a first coating material which is either silanes or titanates and a second coating material which may be boron nitrate, silicone powders, zirconium dioxide, titanium dioxide, and combinations thereof. The Examiner adds that Farer, et al. also teach the use of the disclosed coated particles in cosmetic preparations.

Applicants respectfully submit that Farer, et al. do not anticipate the claims as amended. Farer et al. teach that the second coating layer is 50-99% by weight and preferably, 80-97% by weight of the coated particle (see col. 3, lines 2-4 and claim 1 of Farer, et al.). In contrast, the present claims recite that the amount of the coating layer is 1 to 30% by weight based on the total amount of the coated powder. See claims 1, 6, and 7 as amended. Support for this amendment is

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found in claim 2 as filed and in the specification at page 5, lines 12-13, for example.

Consequently, Farer, et al. cannot anticipate the invention as presently claimed.

Reconsideration and withdrawal of this ground of rejection is respectfully requested.

Rejection under 35 U.S.C. § 103(a)

Claims 1-7 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Farer, et al.

The Examiner admits that Farer, et al. do not teach the refractive indexes set forth in Applicants' claims. However, the Examiner takes the position that since Farer, et al. teach the same materials as Applicants, the refractive indexes are inherent to the components and must therefore fall within the range claimed by Applicants.

In response, as set forth above in response to the rejection under 35 U.S.C. § 102 (b), Farer, et al. teach that the second coating is much thicker than the second coating of Applicants' disclosure. Farer et al. teach a second coating layer which is 50-99% by weight and preferably, 80-97% by weight of the coated particle (see col. 3, lines 2-4 and also claim 1 of Farer, et al.). In contrast, the present claims recite that the amount of the coating layer is 1 to 30% by weight based on the total amount of the coated powder. See claims 1, 6, and 7 as amended. Support for this amendment is found in claim 2 as filed and in the specification at page 5, lines 12-13, for example.

As taught by the specification, it is difficult to obtain natural coloring because of the high screening effect of such components as titanium dioxide (see present specification, page 1, lines 12-20). However, Applicants have unexpectedly discovered that natural coloring can be achieved using such components by controlling the layer thickness if a material with a refractive index of 1.9 to 3.1 is applied to a powder having a refractive index of 1.3 to 1.8 as a core, and a material having a refractive index of 1.3 to 1.8 is further applied. In this case, linear light transmission can be adjusted by controlling the thickness of each layer. The resulting coated particle has a high total transmission of light which is neither taught nor suggested by Farer, et al.

Thus, in contrast to the teaching of Farer, et al., the present invention is characterized in that a certain combination of the refractive indexes of the three parts (core, coating layer, second coating layer) of the structure of the coated powder is defined, and a certain range on the amount of the second coating layer is also defined.

If the amount of the second coating layer is too large relative to the total amount of the coated powder, the degree of linear transmission is not easily adjustable and the total light

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transmission is not high. Therefore, natural coloring without deteriorating lightness is not achieved.

On the other hand, the practice of the claimed invention provides a well balanced thickness of the second coating layer with respect to the core and the first coating layer. Thus, linear transmission is easily adjusted and a high total transmission of light is achieved.

In contrast, Farer et al. does not address the problem of difficulty in achieving natural coloring due to high screening effects of some components. Farer, et al. disclose several coated particles consisting of a base particle, a first coating layer and a second coating layer, where the first coating layer forms a coupling agent (for instance, the base particle of polyvinylidene copolymer, the first coating layer of titanates, and the second coating layer of boron nitride, respectively). However, Farer, et al. teach that the second coating layer is formed with 50% to 99% by weight, preferably 80-97% by weight of the coated particle (col. 3, lines 2-4 and claim 1). The teaching of Farer, et al. does not teach or suggest the coated particle structure claimed by Applicants.

The object of Farer, et al. is to provide the coated powder wherein the second coating layer consisting of boron nitride, etc. is a principal component in order to accomplish excellent emollient properties and other effects. Therefore, the amount of the second coating layer taught by Farer, et al. is much larger than the amount of the second coating layer taught by Applicants. As the second coating layer taught by Farer, et al. is larger than taught by Applicants, the first coating layer is smaller. Farer, et al. do not teach or suggest the structure taught by Applicants. Consequently, Farer, et al. do not achieve the object of the present invention which is natural coloring without deteriorating lightness.

In view of Applicants' amendments and arguments, reconsideration and withdrawal of this ground of rejection is respectfully requested.

CONCLUSION

In view of Applicants' amendments to the claims and the foregoing Remarks, it is respectfully submitted that the present application is in condition for allowance. Should the Examiner have any remaining concerns which might prevent the prompt allowance of the application, the Examiner is respectfully invited to contact the undersigned at the telephone number appearing below.

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Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated:

Jan. 7, 2003

By:

Che S. Chereskin

Che Swyden Chereskin
Registration No. 41,466
Agent of Record
Customer No. 20,995

VERSION WITH MARKINGS TO SHOW CHANGES MADE

Claims 1, 2, 6, and 7 have been amended as shown.

Claim 1. (Amended) A coated powder comprising (A) powder having a refractive index of 1.3 to 1.8 as a core, (B) a coating layer of a material having a refractive index of 1.9 to 3.1 on the powder (A), and (C) a coating layer of a material having a refractive index of 1.3 to 1.8 on the coating layer (B), wherein an amount of the coating layer (C) is 1 to 30 % by weight based on the total amount of the coated powder.

Claim 2. (Amended) The coated powder as claimed in claim 1, wherein an amount of the coating layer (B) consisting of the material having a refractive index of 1.9 to 3.1 is 1 to 50% by weight based on the total amount of the coated powder, ~~and an amount of the coating layer (C) consisting of the material having a refractive index of 1.3 to 1.8 is 1 to 30% by weight based on the total amount of the coated powder.~~

Claim 6. (Amended) A method of producing a coated powder wherein a core powder is coated with at least first and second coating layers, said coated powder permitting nearly 100% total light transmission, the core powder having a refractive index of 1.3 to 1.8, the first coating layer of a material having a refractive index of 1.9 to 3.1, the second coating layer of a material having a refractive index of 1.3 to 1.8, said method comprising the steps of:

designing composition of the coated powder by determining a quantity of the first coating layer and a quantity of the second coating layer based on a correlation between the degree of linear transmission and the quantity of each layer, wherein the quantity of the second coating layer is 1 to 30 % by weight based on the total amount of the coated powder, to impart a predetermined degree of linear light transmission;

forming the first coating layer in the determined quantity on the core powder; and

forming the second coating layer in the determined quantity on the first coating layer formed on the core powder.

Claim 7. (Twice Amended) A method of applying natural coloring on a surface by using a coated powder, comprising the steps of:

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designing composition of the coated powder wherein a core powder is coated with at least first and second coating layers, by determining a quantity of the first coating layer and a quantity of the second coating layer based on a correlation between the degree of linear transmission and the quantity of each layer, wherein the quantity of the second coating layer is 1 to 30% by weight based on the total amount of the coated powder, to impart a predetermined degree of linear light transmission, said coated powder permitting nearly 100% total light transmission, the core powder having a refractive index of 1.3 to 1.8, the first coating layer of a material having a refractive index of 1.9 to 3.1, the second coating layer of a material having a refractive index of 1.3 to 1.8; and
applying the coated powder on the surface.

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